# EXHIBIT B

2015 Kestler Assessment of Bryan Messenger

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

# **Bryan Messenger**

Client ID # 410-15-1103 Date of assessment: 11/02/2015

Date of Birth:

12/04/1981

Grade (years.months): 19.3

Age:

33 years 11 months

Academic Potential: In the above-average range

DIAGNOSIS: Moderate-Severe Dyseidetic Dyslexia / Mild-Moderate Dysphonetic Dyslexia

DYSLEXIA DETERMINATION	2
INTERPRETATION OF WAIS-IV RESULTS	3
DECODING/ENCODING	5
ORAL READING	6
SUMMARY OF ACADEMIC ACHIEVEMENT (WIAT-III) RESULTS	7
PHONOLOGICAL PROCESSING	8
VISUAL-MOTOR INTEGRATION	9
TEST OF INFORMATION PROCESSING SKILLS	10
SUMMARY	12
TABLE OF STANDARD AND PERCENTILE SCORES	12
CLIENT HISTORY	13
BEHAVIORAL OBSERVATIONS	15
SUMMARY OF RESULTS	16
RECOMMENDATIONS	17
Appendix A. WAIS-IV Score Summary	18
Appendix B. WIAT-III Score Summary	21
Appendix C. CLASSIFICATIONS OF SCORES ON STANDARDIZED TESTS	26

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### **DYSLEXIA LEVELS AND TYPES**

**There are four levels of dyslexia.** From the least-severe level to the most severe, they are: Problematic, Mild, Moderate, and Severe.

**Dyseidetic** dyslexia is a reduced ability to perceive whole words for instantaneous reading and spelling, despite the word having been seen on repeated occasions.

**Dysphonetic** dyslexia is a reduced ability to integrate symbols and sounds, resulting in difficulty developing and using word attack skills to decode single, unknown words.

#### DYSLEXIA DETERMINATION

Assessment results indicate that Bryan has Moderate-Severe Dyseidetic Dyslexia / Mild-Moderate Dysphonetic Dyslexia.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### INTERPRETATION OF WAIS-IV RESULTS

## General Intellectual Ability

Bryan was administered 10 subtests of the *Wechsler Adult Intelligence Scale-Fourth Edition* (*WAIS-IV*). His composite scores are derived from these subtest scores. The Full Scale IQ (FSIQ) composite score is derived from 10 subtest scores and is considered the most representative estimate of global intellectual functioning. Bryan's general cognitive ability is within the superior range of intellectual functioning, as measured by the FSIQ. His overall thinking and reasoning abilities exceed those of approximately 96% of individuals his age (FSIQ = 126; 95% confidence interval = 121-130). Bryan may find it easy to keep up with his peers on most tasks that require thinking and reasoning abilities. Bryan's verbal and nonverbal reasoning abilities are in the superior range. He performed slightly better on nonverbal than on verbal reasoning tasks, but there is no meaningful difference between Bryan's ability to reason with and without the use of words.

Bryan's Verbal Comprehension Index (VCI) score, which measures verbal reasoning, comprehension and conceptualization abilities, is in the superior range. His performance was better than approximately 93 out of 100 individuals in his age group.

On the Perceptual Reasoning Index (PRI), which measures the ability to reason without words and to organize information visually, Bryan scored in the superior range. His performance was better than approximately 97 out of 100 individuals in his age group.

Bryan's Working Memory Index (WMI) score, an indication of information processing, attention, and concentration abilities, was in the superior range. He performed better than approximately 95 out of 100 individuals in his age group.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

On the Processing Speed Index (PSI), a measure of mental processing and graphomotor (handwriting) speed, Bryan scored in the average range. His performance was better than approximately 50 out of 100 individuals in his age group.

On the General Ability Index (GAI), which is a summary score of VCI and PRI, Bryan scored in the very superior range. His performance was better than approximately 98 out of 100 individuals in his age group.

#### **Composite Score Summary**

Scale	Sum of Scaled Scores	Comp Sco		Percentile Rank	95% Conf. Interval	Qualitative Description
Verbal Comprehension	42	VCI	122	93	115-127	Superior
Perceptual Reasoning	45	PRI	129	97	121-134	Superior
Working Memory	29	WMI	125	95	117-130	Superior
Processing Speed	20	PSI	100	50	92-108	Average
Full Scale	136	FSIQ	126	96	121-130	Superior
General Ability	87	GAI	130	98	124-134	Very Superior

Confidence Intervals are based on the Overall Average SEMs.

Charts and tables for WAIS-IV composite score profiles, subtest profiles, discrepancy analyses, and subtest score summaries are provided at the end of the report.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

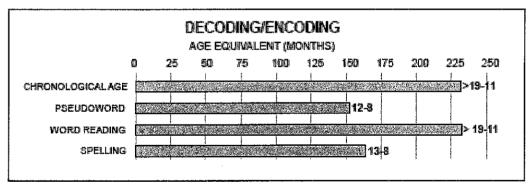
#### **DECODING/ENCODING**

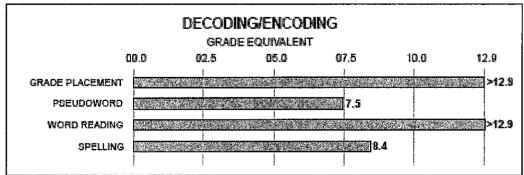
Decoding is the process of reading words. Encoding refers to the process of translating spoken words into written symbols-in other words, spelling. Decoding and encoding subtests From the *Wechsler Individual Achievement Test - Third Edition (WIAT-III)* are used to evaluate an individual's ability to read and spell individual words, one at a time.

- The **Pseudoword Decoding subtest** uses nonsense words to measure the ability to decode unfamiliar words using phonics rules.
- The Word Reading subtest measures the ability to read real words accurately.
- The **Spelling subtest** measures the ability to spell letter sounds and real words.

Bryan's scores are shown below.

	<u>Percentiles</u>
Pseudoword Decoding	23
Word Reading	34
Spelling	23





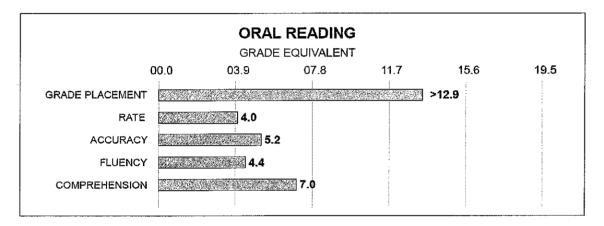
138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### **ORAL READING**

Oral reading fluency is the ability to read text quickly, accurately, automatically, and with understanding. The Gray Oral Reading Tests (GORT- 5) provide a measure of reading fluency, based upon the accuracy and speed with which connected text is read aloud, and also a measure of oral reading comprehension.

Bryan's scores are shown below.



138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

## SUMMARY OF ACADEMIC ACHIEVEMENT (WIAT-III) RESULTS

Additional *WIAT-III* subtests were administered to Bryan in order to document his current level of academic achievement in other subjects, in addition to reading and spelling subtests that are described in more detail above. A summary of Bryan's scores is shown below and in a table at the end of the report. Descriptive classifications for scores on the *WIAT-III* are slightly different than for other tests, with Average scores between 85 and 115. Bryan's overall Total Achievement Composite score of 107 (95% confidence interval = 104 - 110) was in the Average range, in the  $68^{th}$  percentile compared to same-age peers. His performance on tasks involving Mathematics was Above Average, in the  $97^{th}$  percentile. His performance on all other tests, including Oral Language skills, Reading, Written Expression, and Math Fluency, were in the Average range.

#### **Composite Score Summary**

Composite	Standard Score	95% Confidence Interval	Percentile Rank	Qualitative Description
Oral Language	112	105-119	79	Average
Total Reading	87	82-92	19	Average
Basic Reading	90	85-95	25	Average
Reading Comprehension and Fluency	87	79-95	19	Average
Written Expression	103	96-110	58	Average
Mathematics	128	123-133	97	Above Average
Math Fluency	106	99-113	66	Average
Total Achievement	107	104-110	68	Average

Additional charts and tables for WIAT-III composite score profiles, subtest score profiles, discrepancy analyses, and subtest score summaries are included at the end of the report.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

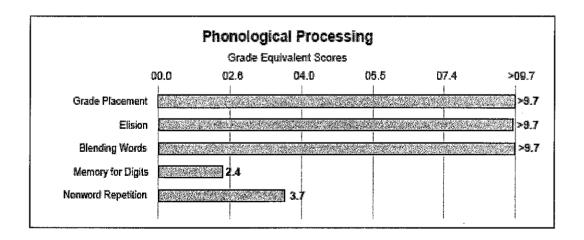
#### PHONOLOGICAL PROCESSING

The *Comprehensive Test of Phonological Processing (CTOPP)* is a test of an individual's ability to use the sound structure of oral language, especially as it relates to mastery of written language.

The **Elision subtest** measures the ability to remove phonological segments from spoken words in order to form other words. The **Blending Words subtest** measures the ability to put sounds together to form words. A deficit in this area is a critical indicator of, and aspect of, dyslexia.

The **Memory for Digits subtest** measures the ability to repeat a sequence of numbers accurately, and the **Nonword Repetition subtest** measures the ability to repeat nonsense words accurately. A deficit in this area affects the ability to decode unknown, multisyllable words.

Bryan's scores are shown below.



138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### VISUAL-MOTOR INTEGRATION

The Beery-Buktenica Developmental Test of Visual-Motor Integration (Beery VMI) is a test of how well an individual is able to coordinate visual and motor abilities.

The VMI subtest measures visual-motor integration, which is the ability to perceive visual information and reproduce it by means of finger-hand movements. This ability affects the capacity to write; to copy work from textbooks, reference materials, or the chalkboard; to line up math problems; and to perform other writing tasks.

The supplemental **Visual Perception subtest** measures the ability to make sense of what is being seen. Visual perception is the ability to discern directionality and orientation, as well as to discriminate among fine details. Visual perception affects one's ability to recognize the similarities and differences in written words.

Bryan's scored in the average range at the 58<sup>th</sup> percentile on the VMI, indicating that his visual-motor coordination is adequately developed for his age. Bryan's score on the Visual Perception subtest was somewhat lower, in the 30<sup>th</sup> percentile, but still within the average range. However, given Bryan's extremely well-developed perceptual reasoning, evidenced by his WAIS-IV PRI score of 129 (97<sup>th</sup> percentile), there is a meaningful discrepancy with his ability perceive visual information on a test that does not involve reasoning. Bryan is able to reason using visual information at a very high level despite having relatively weak skills in visual perception. This pattern of scores is consistent with his relatively lower score on the WAIS-IV Processing Speed Index (PSI = 100, 50<sup>th</sup> percentile), which measures speed of visual perception with minimal reasoning demands.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### TEST OF INFORMATION PROCESSING SKILLS

The *Test of Information Processing Skills (TIPS)* provides a measure of skills related to acquiring, storing, and processing information. It measures ordered and unordered recall in both the visual and auditory modalities. Its subtests measure short-term memory, working memory following verbal interference tasks, and delayed recall of auditory information. A summary of Bryan's test scores appears below.

	<u>Percentiles</u>
Visual Ordered	50
Visual Unordered	68
Visual Modality	61
Auditory Ordered	37
Auditory Unordered	42
Auditory Modality	37
Delayed Recall	91

On the current test, Bryan's overall score for visual memory processing is in the average range and for auditory memory processing it is in the average range.

Analysis of the scores helps us to understand how Bryan acquires and retrieves information when learning: when seeing, listening, and reading.

The results of the current test indicate that Bryan does not have a preference in learning modality. The difference between the visual and auditory modality scores is not statistically significant, indicating that Bryan is likely to learn equally well through either visual or auditory means.

The delayed recall score measures the ability to recall and retrieve information over time, giving an indication of Bryan's ability to retain learned information for later use. Bryan's delayed recall score on the current test is in the above average range.

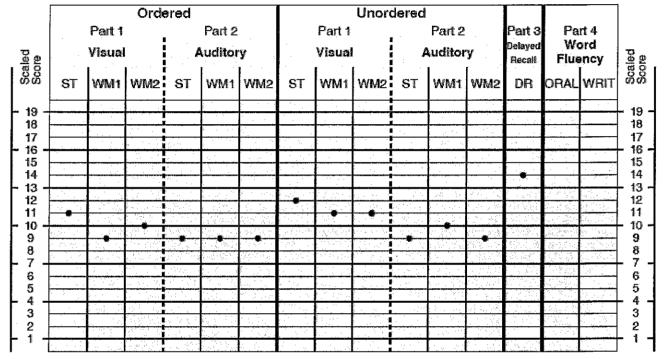
A comparison of the ordered and unordered scores within each modality gives an indication of Bryan's ability to maintain correct sequential order when processing, storing, and retrieving information. The results of the current test indicate there is not a significant difference between ordered and unordered recall in the visual modality, and there is not a significant difference between ordered and unordered recall in the auditory modality.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### TEST OF INFORMATION PROCESSING SKILLS

## **Subtest Scaled Scores**



Memory Index							
	Vis Ord	sual Unord	<b>Aud</b> Ord	<b>itory</b> Unord			
ST	6	8	5	5			
WM1	3	7	1	5			
WM2	2	8	2	5			

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

# **SUMMARY**

DIAGNOSIS: Moderate-Severe Dyseidetic / Mild-Moderate Dysphonetic Dyslexia

Phonological Awareness Weakness / Deficit	YES	<u>NO</u>			
Phonological Memory Weakness / Deficit	<b>YES</b>	NO			
Visual-Motor Integration Weakness / Deficit	$\underline{\mathbf{YES}}$	NO			
Visual Perception Weakness / Deficit	YES	NO			
Short-Term Memory Capacity Weakness / Defic	cit YES	NO	Visual Au	iditory	
Visual Modality Processing Weakness / Defic	it YES	NO			
Auditory Modality Processing Weakness / Deficit	YES	NO			
Sequential Ordering Weakness / Deficit	YES	NO	Visual Au	ditory	
Delayed Recall (Auditory) Weakness / Deficit	YES	<u>NO</u>			
Pseudoword Decoding Level	BELO	<b>W</b> AT	ABOVE	Grade	Level
Word Reading Level	BELOV	W <b>AT</b>	ABOVE	Grade	Level
Spelling Level	BELO	<u><b>W</b></u> AT	ABOVE	Grade	Level

TABLE OF STANDARD AND PERCENTILE SCORES	Standard Score (Mean = 100; Stand	Percentile Score lard Deviation = 15)
Wechsler Individual Achievement		
Test - 3rd Edition (WIAT-III)		
Pseudoword Decoding	89	23
Word Reading	94	34
Spelling	89	23
Beery VMI - 6th Edition		
Visual-Motor Integration	103	58
Visual Perception	92	30
Test of Information Processing Skills (TIPS)		
Visual Ordered	100	50
Visual Unordered	107	68
Visual Modality	104	61
Auditory Ordered	95	37
Auditory Unordered	97	42
Auditory Modality	95	<b>3</b> 7
Delayed Recall	120	91

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### **CLIENT HISTORY**

#### Referral reason:

Bryan is a 33 year-old Caucasian male who is completing medical school at St. George's University, and currently applying for residency programs in Pediatrics. He is seeking a reevaluation to document a history of specific learning disability in reading, so that he can apply for accommodations on the United States Medical Licensing Examination.

#### Medical history:

Bryan has had vision testing administered in the fall of 2011 with results indicating he has astigmatism. Bryan was prescribed glasses to be worn when reading, doing computer work, and night driving. Bryan has not had his hearing evaluated, but notes that it has never been a problem.

Bryan has a history of moderately severe ear infections that began when he was 18 months old. Bryan broke his collar bone when he was 11 months old, his left wrist when he was 6 years old, and his right wrist when he was 12 years old.

## **Educational history:**

Bryan recalls having trouble learning letter names in kindergarten and letter sounds in 1st grade. Bryan displays difficulty with reading and spelling skills. Bryan rates his performance in reading, handwriting, and spelling as below average. Bryan received resource services in elementary and junior high school. He did not pursue a re-evaluation for disability services in high school or college, but he states that he had to work very hard to get through school and did not know why he struggled. After college, he had difficulty getting acceptance to medical school due to low MCAT scores. In Bible study, his wife noticed that he had an unusual way of reading, making large errors in pronunciation and often reading words that were entirely different than what was on the page. Bryan's wife encouraged him to get tested to determine if he had dyslexia.

Bryan was previously tested in December 2011 by Dr. Edward Martinelli of Utah TestEd, and given a diagnosis of Reading Disorder. The prior evaluation concluded that Bryan has well developed cognitive abilities, with scores ranging mostly from High Average to Very Superior. He demonstrated significant personal weakness, however, in processing speed, which was in the Average range.

The results of the evaluation in 2011, along with his history of receiving services in grade school, allowed him to receive accommodations with the Office of Disability Services at St. George's University Medical School in Grenada. Bryan reports that being given double time on exams was extremely helpful for him in medical school, and allowed him to do well academically. He did have difficulty in two courses that required a great deal of memorization. He had to repeat Microbiology, and he had to take a completion exam for Immunology that allowed him to pass despite failing in class exams. He had a C average in his academic course work, but a A/B+ average on his clinical work. Currently, Bryan is completing clinical electives while applying for Pediatric residency. He needs to pass the second step of the board exams, which involves 9 hours of written questions about clinical topics.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

Bryan believes his strongest abilities are relating to people and seeing different perspectives. Bryan enjoys being outdoors, spending time with family, good food, and photography.

The Dyslexia Center Self-Rating for Attention indicates that Bryan displays few, if any, issues with attention and self-regulation. His previous psychological evaluation in 2011 also ruled out Attention Deficit/Hyperactivity Disorder.

The Dyslexia Center Self-Rating for Vision/Visual Processing indicates that when reading, Bryan loses place often, uses his finger to keep his place, frequently leaves out words, re-reads lines, skips lines, and confuses similar words. When writing, Bryan has trouble lining up numbers, makes mistakes when copying from the board, and has poorly spaced or crooked writing. When using his eyes, Bryans notes the print seems to blur. Bryan also repeatedly confuses left and right, and tends to avoid desk work.

The Self-Rating for Listening/Auditory Processing/Communicating indicates that Bryan hears less well, or is less attentive/productive, in normal-but-busy surroundings; is unusually forgetful of information previously memorized, or of household/school/work routines and responsibilities, despite frequent reminders; has difficulty with phonics; confuses similar-sounding words; is a poor speller who makes errors that are phonetically correct; has problems with speech clarity or articulation, or with grammar, now or in the past; has difficulty reading or writing efficiently; feels the need to ask many extra questions to clarify tasks before starting; often interprets words too literally, becoming confused of suffering hurt feelings; listeners have trouble following train of thought; and he gets the details and facts, but often misses "the big picture" —has a hard time prioritizing or summarizing information.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### BEHAVIORAL OBSERVATIONS

Bryan arrived on time to both testing sessions. He was well-groomed, friendly, and polite. He engaged easily with evaluator, and talked openly about his history of difficulties with school. He appeared calm and relaxed throughout the administration of tests on both days. He showed good attention and task persistence. He appeared motivated to do well, and tolerated frustration well on more challenging tasks.

Bryan worked carefully and slowly, often reviewing his answers before moving on. On timed tasks involving reading or writing, he used the entire allotted time, answering when encouraged to give a response. On the WIAT-III essay subtest, Bryan used the entire 10 minutes and continued to work for an additional 30 seconds to finish. On the WAIS-IV, Bryan's score on the timed subtest of Coding was low compared to his other scores, and contributed to his relatively weak Processing Speed Index score. Other timed tests on the WAIS-IV involved visual-spatial or quantitative reasoning skills, skills that are relative strengths for Bryan. He had no trouble responding quickly to test items on tests that involved visual-spatial or quantitative reasoning. However, he demonstrated significant slowness on tasks that involved reading, spelling, or written expression.

Given his test-taking behavior and attitude, we are confident that the scores reported herein are essentially accurate representations of Bryan's current functioning.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### **SUMMARY OF RESULTS**

The results of the current evaluation support a diagnosis of Dyslexia, or Reading Disorder. Specifically, his pattern of decoding and encoding written language indicates both difficulty with perceiving and remembering whole words, as well as difficulty integrating symbols and sounds to use rules of phonics for reading and spelling. These patterns of difficulty are referred to as Dyseidetic and Dysphonetic Dyslexia, respectively. The severity of difficulty that Bryan demonstrates is Moderate-to-Severe Dyseidetic dyslexia and Mild-to-Moderate Dysphonetic dyslexia.

In addition to identifying Bryan's specific Reading Disorder, the current evaluation was able to determine Bryan's cognitive strengths and weaknesses. Consistent with his previous psychoeducational evaluation in 2011, Bryan's overall cognitive ability, based on the General Ability Index of 130, was in the Very Superior range, at the 98<sup>th</sup> percentile. His pattern of cognitive strengths and weaknesses was also the same as reported in his previous evaluation, with his greatest strength being his ability to use nonverbal reasoning and organize visual information, reflected by his scores in the superior range on the Perceptual Reasoning Index. His greatest area of cognitive weakness was on tasks involving speed of mental processing and graphomotor speed, which was reflected by his score in the average range on the Processing Speed Index.

The current evaluation was also able to determine his level of academic achievement in Mathematics, Oral Language, Written Expression, as well as Reading ability. Overall, Bryan performance on tests of academic achievement was in the Average range compared to same-age peers. Given Bryan's real-world academic achievement, as a college graduate who has successfully completed all course work in medical school, these test results demonstrate a disconnect between what Bryan can show on tests and what he can demonstrate through more meaningful ways. He did show areas of great strength on the current evaluation of academic achievement, Specifically, Bryan's Mathematics skills were well Above Average. He also demonstrated strong Oral Language skills. However, Bryan's performance on tests of Reading, Written Expression, and Reading Comprehension and Fluency were all in the Average Range. He demonstrated clinically significant weakness in Basic Reading skills, with composite score in the low end of the Average range. In addition, he demonstrated poor spelling, sentence composition, and grammar and mechanics in composing essays, all at the low end of the Average range. These findings support diagnoses of Reading Disorder and Disorder of Written **Expression.** The term Dyslexia is often used synonymously with the formal DSM-5 classification of Reading Disorder, and is included in the DSM-5 as an alternate diagnostic label.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

#### RECOMMENDATIONS

In addition to specific recommendations for remediation of Dyslexia and Disorder of Written Expression, which are included in a separate document, it is recommended that Bryan receive testing accommodations that will enable him to demonstrate his knowledge in a way that minimizes the obstacles created by dyslexia. Dyslexia makes it difficult to read, write, and comprehend written language with accuracy and fluency. This is particularly the case for Bryan, as demonstrated by the current evaluation results. Thus, it will be important that he receive the following testing accommodations:

- Bryan should be given extended time (100%, double) to complete tests. His level of fluency in reading and writing are below the level that he can demonstrate knowledge. During the current evaluation Bryan's pace on timed and untimed tests that involve written language indicates that he needs at least double time.
- Bryan's performance during the evaluation also supports accommodation for extra breaks, given the disproportionate mental energy he expends on reading and writing tasks.
- Due to visual-perceptual difficulties contributing to dyslexia, documented in the current evaluation, tools to aid in reading of test items are requested. These can include:
  - o as magnification, highlighting, answer masking and/or a line-reader tool.
  - o text-to-speech software or a reader so that test items are presented aurally.
- Due to Bryan's documented Disorder of Written Expression, dictation services (either speech-to-text software or a scribe) should be provided for test responses that require short answer or essay responses.

Lisa P. Kestler, Ph.D. NJ License #5415

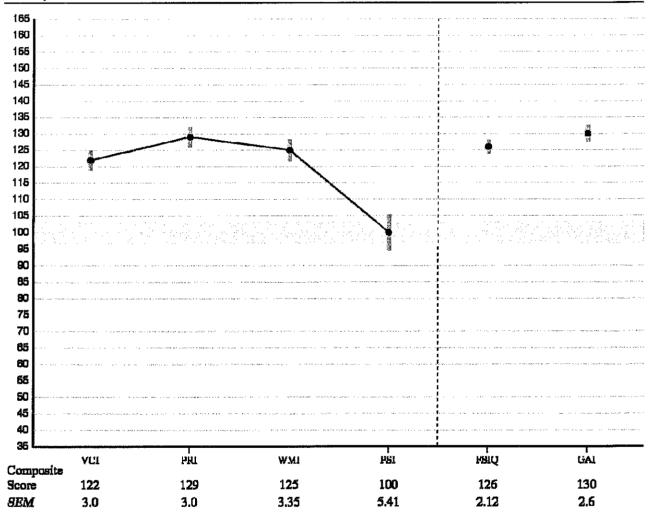
11/13/2015

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

# Appendix A. WAIS-IV Score Summary

## Composite Score Profile



The GAI is an optional composite summary score that is less sensitive to the influence of working memory and processing speed.

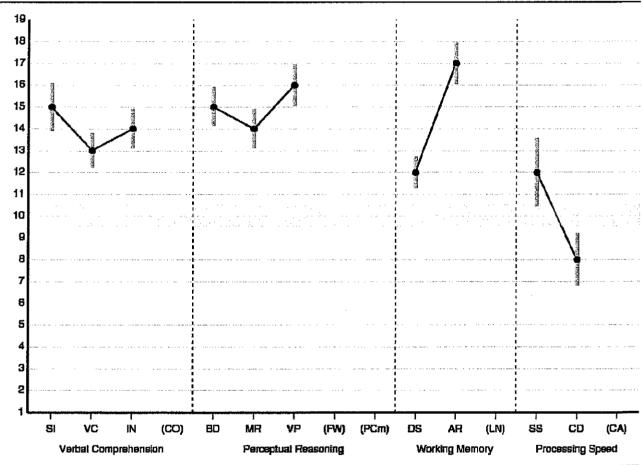
**Note.** The vertical bars represent the standard error of measurement (SEM). SEM values are based on the examinee's age.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

WAIS-IV Score Summary (cont.)

## **Subtest Scaled Score Profile**



Note. The vertical bars represent the standard error of measurement (SEM).

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

# WAIS-IV Score Summary (cont.) ANALYSIS

## **Index Level Discrepancy Comparisons**

Comparison	Score 1	Score 2	Difference	Critical Value .05	Significant Difference Y/N	Base Rate by Overall Sample
VCI - PRI	122	129	-7	8.32	N	31.8
VCI - WMi	122	125	-3	8.81	N	41.5
VCI - PSI	122	100	22	12.12	γ	8.7
PRI - WMI	129	125	4	8.81	N	39.7
PRI - PSI	129	100	29	12.12	Υ	3.0
WMI - PS!	125	100	25	12.47	Υ	6.0
FSIQ - GAI	126	130	-4	3.68	Υ	23.8

Base Rate by Overall Sample. Statistical significance (critical value) at the .05 level.

## **Verbal Comprehension Subtests Summary**

				Reference Group			
Subtest	Raw Score	Scaled Score	Percentile Rank	Scaled Score	SEM		
Similarities	33	1.5	95	15	1.08		
Vocabulary	48	13	84	14	0.79		
Information	20	14	91	14	0.90		

#### **Perceptual Reasoning Subtests Summary**

				Reference Group	
Subtest	Raw Score	Scaled Score	Percentile Rank	Scaled Score	SEM
Block Design	61	15	95	15	0.90
Matrix Reasoning	23	14	91	14	0.90
Visual Puzzles	24	16	98	16	0.95

#### **Working Memory Subtests Summary**

				Reference Group			
Subtest	Raw Score	Scaled Score	Percentile Rank	Scaled Score	SEM		
Digit Span	32	12	75	12	0.73		
Arithmetic	21	1.7	99	17	0.95		

# **Processing Speed Subtests Summary**

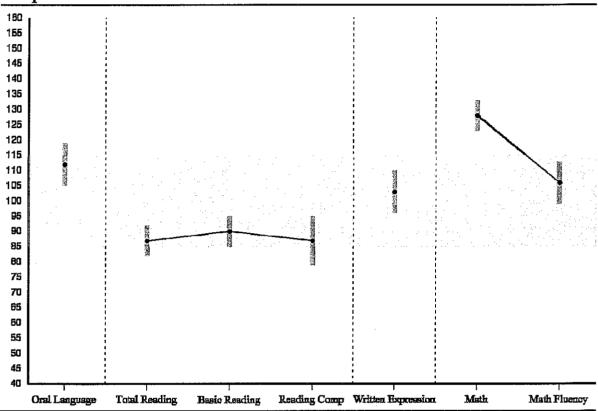
		Reference Group	3roup		
Subtest	Raw Score	Scaled Score	Percentile Rank	Scaled Score	SEM
Symbol Search	37	1,2	75	11	1.56
Coding	60	8	25	8	1.20

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

# Appendix B. WIAT-III Score Summary

## Composite Score Profile



Note. The vertical bars represent the confidence interval at 95%.

#### **Composite Score Summary**

_		-	95%			
Composite	Sum of Subtest Standard Scores	Standard Score	Confidence Interval	Percentile Rank	Qualitative Description	
Oral Language	220	112	105-119	79	Average	
Total Reading	363	87	82-92	19	Average	
Basic Reading	183	90	85-95	25	Average	
Reading Comprehension and Fluency	180	87	79-95	19	Average	
Written Expression	308	103	96-110	58	Average	
Mathematics	252	128	123-133	97	Above Average	
Math Fluency	315	106	99-113	66	Average	
Total Achievement	1054	107	104-110	68	Average	

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

## WIAT-III Score Summary (cont.)

Subtest Score Summary				
Subtest	Raw Score	Standard Score	95% Confidence Interval	Percentile Rank
Listening Comprehension	-	114	104-124	82
Reading Comprehension	41 <sup>1</sup>	102	90-114	55
Math Problem Solving	68	127	120-134	96
Sentence Composition	-	95	85-105	37
Word Reading	64	94	87-101	34
Essay Composition	-	124	113-135	95
Pseudoword Decoding	35	89	82-96	23
Numerical Operations	53	125	119-131	95
Oral Expression	-	106	97-115	66
Oral Reading Fluency	98 <sup>1</sup>	78	71-85	7
Spelling	38	89	83-95	23
Math Fluency-Addition	45	102	90-114	55
Math Fluency-Subtraction	47	113	104-122	81
Math Fluency-Multiplication	33	100	91-109	50

Indicates a raw score that is converted to a weighted raw score (not shown).

## Supplemental Subtest Score Summary

Subtest	Raw Score	Standard Score	95% Confidence Interval	Percentile Rank
Essay Composition: Grammar and Mechanics	92	96	84-108	39
Oral Reading Accuracy	353*	68	53-83	2
Oral Reading Rate	220*	79	71-87	8

Cumulative Percentage	es
Word Reading Speed	The score is the same as or higher than the scores obtained by 25% of students in the normative sample; 75% of students in the normative sample scored higher than this score.
Pseudoword Decoding Speed	The score is the same as or higher than the scores obtained by 5% of students in the normative sample; 95% of students in the normative sample scored higher than this score.

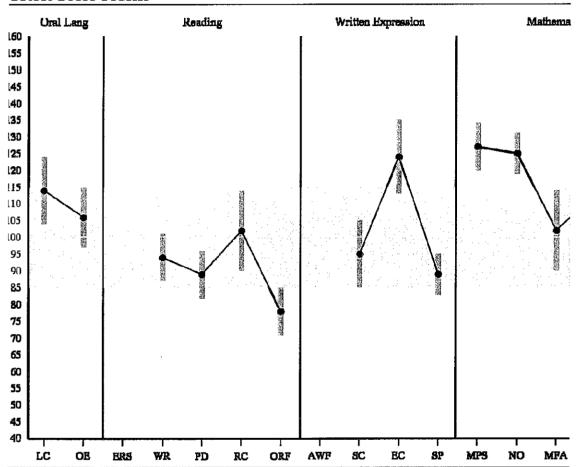
<sup>&</sup>lt;sup>2</sup> Indicates that a raw score is based on a below grade level item set.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

## WIAT-III Score Summary (cont.)

# ubtest Score Profile



lote. The vertical bars represent the confidence interval at 95%.

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

## WIAT-III Score Summary (cont.)

## **Subtest Component Score Summary**

Subtest Component	Raw Score	Standard Score	Percentile Rank	Qualitative Description
Listening Comprehension		7.00g 20度 10g 10g 10g 10g		S. Marie Conf. (S. Marie Conf.)
Receptive Vocabulary	18	117	87	Above Average
Oral Discourse Comprehension	22	109	73	Average
Sentence Composition	alica a presidente		on mantings.	
Sentence Combining	18	99	47	Average
Sentence Building	23	93	32	Average
Essay Composition				
Word Count	184	118	88	Above Average
Theme Development and Text Organization	16	125	95	Above Average
Oral Expression	www.long.gag			4 <u>4 7 1 8 9 9 3 7 7 7 </u>
Expressive Vocabulary	16	114	82	Average
Oral Word Fluency	47	121	92	Above Average
Sentence Repetition	18	81	10	Below Average

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

## WIAT-III Score Summary (cont.)

#### PATTERN OF STRENGTHS AND WEAKNESSES ANALYSIS

Area of Achievement Weakness	WIAT-III	Basic Readi	Basic Reading: 90							
Area of Processing Weakness	WAIS-IV	PSI: 100								
Area of Processing Strength	WAIS-IV	PRI: 129								
Comparison	Relative Strength Score	Relative Weakness Score	Difference	Critical Value .01	Significant Difference Y/N	Supports SLD hypothesis? Yes/No				
A Processing Strength/ Achievement Weakness	129	90	39	10.95	Υ	Yes				
B Processing Strength/ Processing Weakness	129	100	29	15.96	Υ	Yes				

138 Ewing Street Princeton, NJ 08540

Margaret G. Tuttle, Director Lisa P. Kestler, Ph.D., Diagnostician Phone: (609) 647-2456 dyslexiaprinceton@verizon.net

26

# Appendix C. CLASSIFICATIONS OF SCORES ON STANDARDIZED TESTS

When a new test is developed, it is *normed* on a *sample* of hundreds or thousands of people. The sample should be like that for a good opinion poll: female and male, urban and rural, different parts of the country, different income levels, etc. The scores from that norming sample are used as a yardstick for measuring the performance of people who then take the test. This human yardstick allows for the difficulty levels of different tests. The student is being compared to other students on both difficult and easy tasks. You can see from the illustration below that there are more scores in the middle than at the very high and low ends. Many different scoring systems are used, just as you can measure the same distance as 1 yard, 3, feet, 36 inches, 91.4 centimeters, 0.91 meter, or 1/1760 mile.

**PERCENTILE RANKS (PR)** simply state the percent of persons in the norming sample who scored the same as or lower than the student. A percentile rank of 50 would be Average – as high as or higher than 50% and lower than the other 50% of the norming sample. The middle half of scores falls between percentile ranks of 25 and 75.

**STANDARD SCORES** ("quotients" on some tests) have an average (*mean*) of 100 and a *standard* deviation of 15. A standard score of 100 would also be at the 50<sup>th</sup> percentile rank. The middle half of these standard scores falls between 90 and 110.

**SCALED SCORES** ("standard scores on some tests) are standard scores with an average (*mean*) of 10 and a *standard deviation* of 3. A scaled score of 10 would also be at the 50<sup>th</sup> percentile rank. The middle half of these standard scores falls between 8 and 12.

	Eac	ere are ch & & &	200 &s. = 1%. & &&&&&& &&&&&&	&&& &&& &&&	&& &&&& &&&& &&&& &&&& &&&& &&&&&	8.8 8.8 8.8 8.8 8.8 8.8	28.28.28.28.28.28.28.28.28.28.28.28.28.2	&& &&&&&&& &&&&&& &&&&&& &&&&&& &&&&&& &&&&	&&& &&& &&&	888. 888. 888. 888. 888.	& &&&&&&&	& & &	i &	
Percent in each	2.2	2%	6.7%	16	16.1%		50%		16.1%		6.7%	2.	2.2%	
Standard Scores	-	69	70 – 79	80	80 – 89		90 – 109		110 – 119		120 – 129	13	130	
Scaled Scores	1 2	3	4 5	6 7	7	8	9 10	11	12 1	3	14 15	16 17	18 19	
Percentile Ranks		02	03 - 08	09	J – 24		25 -	- 74	75 – 90		91 – 97	98	3 –	
Wechsler Classification		mely w	Borderline		Low verage		Average		High Average		Superior		ery erior	
WIAT-III Classification	Very Low <55	Low 55 – 69	Below Avera – 84	ge 70	Aver 85 –			•			ove Average 116 – 130	Super -ior 131- 145	Very Super -ior 146 –	

Adapted from Willis, J. O. & Dumont, R. P., *Guide to identification of learning disabilities* (1998 New York State ed.) (Acton, MA: Copley Custom Publishing, 1998, p. 27). Also available at http://alpha.fdu.edu/psychology/test\_score\_descriptions.htm.